

Affect & Emotion

Newsletter of the NCCR Affective Sciences

THE EMOTIONAL POWER OF MUSIC



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RESEARCH FOCUS

The emotional power of music



The NCCR Affective Sciences focus on Aesthetic Emotions is intensively developing research activities centered around the role of emotions in music. Prof. Bernardino Fantini tells us more about the research program and the collaboration with public and private partners.

After the very successful international conference on the emotional power of music (June 2009, proceedings submitted for publication to Oxford University Press), the NCCR Affective Sciences' focus on Aesthetic Emotions is intensively developing a series of research activities centered around the role of emotions in the production, understanding, and enjoyment of music.

The research focus investigates a set of interrelated questions: What are the mechanisms of action of the 'emotional power of music'? Are they physiological, psychological, or socio-cultural? How does music produce and/or communicate emotions at the level of the composer, the performer, and the listener? What is the nature of the emotions embodied in or produced by music? Are they identical or similar to the ordinary or 'utilitarian' emotions, or are they of a different nature?

The traditional idea assumes a linear emotional passage between composer, performer and listener: the composer undergoes an emotional experience which he wants to transmit or communicate to others; he creates a work choosing a particular musical form which is susceptible to produce and transmit moods, feelings and emotions; the performer's aim is to fully manifest this emotional content and provoke the same emotion in the listener.

However, a composer and a performer do not need to feel the emotion they intend the music to be expressive of. Similarly, the listener can recognize the music as being expressive of a particular emotion without feeling it and without assuming that the composer and the performer were feeling the same emotion. The emotions felt by the listener can be distinct from the emotions felt by the composer and the performer, and of a different nature. The 'transmission theory' in its simplistic version is fundamentally flawed, for it represents music as a simple tool. The 'contagion' of emotion is however a well recognized fact and it is necessary to elaborate a more articulated explanation of it. One possibility is to assume that the production of music and the production of emotion are contextual, in the sense that the emotional processes of the composer are produced or modulated by the compositional activity itself. The linear model (emotion-music-emotion) can be fruitfully abandoned in favor of a more complex model based on the production of emotion during the composition, the performance, and the act of listening to music.

According to the classical theory proposed by E. Hanslick in the 19th century, music can be understood and appreciated only by an impassionate contemplation of its "purely musical" features. According to this theory, the rational understanding of a musical form can eventually produce some emotions (gratification, admiration, awe, pleasure, etc.), but these emotions are not essential for the recognition of its intrinsic value and it is irrelevant if music represents an emotion (in particular the composer's emotions) or produces it in the listener. However, the claim that the aesthetic value of music is essentially unrelated to emotions cannot explain why so strong and diverse emotions are excited by music in the composer, the interpreter and the listener. The question remains whether the arousal of specific emotions is relevant or necessary for an adequate aesthetic understanding of music.

The distinction between 'basic emotions' and 'highly cognitive emotions' can be of help in the understanding of the emotional power of music. Basic emotions like anger, contempt, fear, disgust, joy, lust, pride and shame have been constantly represented in music, but in normal conditions they are not produced in the listener. Other emotions, which show a mixture of basic and cognitive elements, can be produced (irritation, gratitude, compassion, and especially tension, relaxation and surprise). A third class of emotions is more directly associated and produced by music, such as admiration, awe, amusement, being touched, boredom, longing, and the experience of the sublime, even if this concept remains elusive. These emotions are usually defined as aesthetic and are clearly separated from the 'ordinary', utilitarian emotions.

Much of the work on this topic has been realized within narrow disciplinary boundaries (in musicology, history, philosophy, psychology, sociology, and neurosciences). The NCCR research focus on Aesthetic Emotions aims to break down these boundaries to examine the central issues combining the contribution of specialists from diverse disciplines as well as music composers, performers and listeners. A series of events (seminars, performances, workshops, conferences, etc.), with the participation of specialists from diverse disciplines, musicians, and singers, is planned in collaboration with the Geneva High School of Music, the Geneva Opera House, the University of Geneva and the Ambronay Baroque Festival. A detailed program of these activities will be shortly published in the website of the NCCR ■

INTERVIEW

Emotion and gender under a power perspective



Would you hate a woman boss as much as a man boss?
Dr. Petra Schmid describes the role played by gender in people's emotional reactions to social power.
An interview by Dr. Corrado Corradi dell'Acqua.



Dr. Petra Schmid, postdoctoral student, works on the project "Emotion and Gender under a power perspective" with Prof. Marianne Schmid Mast at the University of Neuchâtel.

Dr. Corrado Corradi dell'Acqua, postdoctoral student, works on the project "Cerebral bases of individual differences in affect perception and regulation" with Prof. Patrik Vuilleumier at the University of Geneva.

CCD: Your project title is "Emotion and Gender under a Power Perspective". Could you tell me what it is about?

PS: The aim is to examine the effects of social power on felt and expressed emotions with a focus on gender effects.

CCD: Why studying the relation between these three factors?

PS: Power and emotions play a crucial role in social interactions, and little is known about how they interact. For instance, which are the consequences of social power on the experience and the expression of emotions? Scholars suggest that high social power should evoke positive emotions, whereas low social power should be associated with negative emotions. However, empirical evidence in favor of this theory is scarce.

CCD: What about gender...

PS: Gender might be one of the crucial factors modulating the power-emotion link. Stereotypically, men occupy higher power roles than women. There is the simplistic claim that men generally express power-related emotions, whereas women do not. But think what would happen if these stereotypes were suddenly reversed: what would be, for instance, experienced by men in powerless roles facing women in powerful roles?

CCD: And this is what you have investigated...

PS: Yes, by two studies conducted in our laboratory. We placed volunteers in a sophisticated virtual-reality environment in which they interacted with virtual humans. In this way we were able to simulate power-related interactions between the participants and their virtual partners. For instance, in our first study participants received feedback by a virtual partner which was hierarchically superior or inferior. After this feedback was received, we assessed through questionnaires the participants' emotional state. The second study was similar to the first, except that participants, rather than receiving, gave feedback to the virtual partner.

CCD: I guess that high power roles made participants happier...

PS: Only in a very broad sense. Some emotions, such as pride or happiness,

were indeed more associated with being in a high-power position, whereas others, such as anger or sadness, were mostly associated with being in a low-power position. However, participants' self-reported emotional state did not reflect exclusively power, but also gender.

CCD: How?

PS: First of all, the participants' gender was crucial. Unhappiness associated with being in a powerless position was greater in males than in females. Secondly, the gender of the virtual partner had an impact as well: for instance, when the virtual partner was male, women additionally felt sadder in the high power role compared to the low power role, whereas men felt relatively sadder in the low power role over a female partner. Our research shows that gender is a crucial factor, and that previous models should account for it.

CCD: Are you still following this line of research?

PS: Sure. In the next step, we plan to test effects of gender and power on apprehension. Existing research suggest that high-power people are more relaxed and less stressed than low-power people. We would like to see whether interactions in high-power roles reduce stress feelings in subsequent tests. Furthermore, we'd like to see whether such putative reduction is influenced as well by the participants' and the virtual partner's gender ■

NEWS

Events

Philomaton project, Olivier Massin launched the Philomaton project in March 2010, in collaboration with Philipp Keller. It offers online philosophical videos for the general public. Many members of Thumos (The Geneva research group on the philosophy of Emotions, Values and Norms) have participated in these videos since the project was started. More information can be found on <http://www.philosophie.ch/philomaton-mobile/>.

New Thumos webpage, The Thumos members have launched a new webpage « Questions sur la philosophie » in collaboration with the TSR and the other members of the Philosophy Department at the University of Geneva.

Montreux Jazz Festival, July 2010. Prof. Bernardino Fantini, Prof. Didier Grandjean, Prof. Patrizia Lombardo and Dr. Clara James organized four workshops on music and emotion for the Montreux Jazz Festival.

TV-Broadcast Dr. Corrado Corradi dell'Acqua (GE) and Dr. Tania Singer (ZH) were on TV to talk about empathy in a new series called "Specimen" (Je suis égoïste, toi non plus, TSR1, April 14, 2010) ■

ISSAS 2010

Last August the Center (in collaboration with the European Collaborative Research Project "The Social Dimension of Emotion Regulation", of the European Science Foundation) celebrated the second edition of the **International Summer School in Affective Sciences** (ISSAS) around the topic of emotion regulation, resulting in 10 days of intense and enjoyable cross-disciplinary work and human encounter. Faculty and students alike actively participated in the discussions, often leading to heated academic debate and fun moments to remember. The faculty provided an expert and comprehensive overview of the state of the art and main issues of debate in emotion psychology, neuroscience, social and cultural psychology, work and organizational psychology, philosophy and literature. The morning lectures were followed by discussion sessions in the afternoon. Our students also teamed into working groups according to thematic orientations to design a realistic research project aimed to address some of the unresolved issues in the field of emotion regulation. The faculty members were always

available to help them in the afternoon workshops, and many fruitful discussions took place in the welcoming gardens of the Château de Bossey, overlooking Lake Geneva and the Mont Blanc. At the end of the school, all groups presented their projects to the rest of the attendants and a proposal to study aesthetic emotions experimentally put forward by a highly interdisciplinary group was voted as best research project by peers and faculty, and obtained the ISSAS prize. The organization committee would like to express their gratitude to all who contributed to make ISSAS 2010 a success ■



Staff changes

- Carolina Labbe Rodriguez and Kim Torres-Eliard were hired on August 1st, 2010 as doctoral students under the supervision of Prof. Didier Grandjean on the EU 7th Framework Program SIEMPRE (Social Interaction and Entrainment using Music Performance Experimentation).
- Sezen Cekic was hired on September 1st, 2010, as a doctoral student under the supervision of Prof. Didier Grandjean, in collaboration with Prof. Maria-Pia Victoria-Feser from the Faculté des Sciences Economiques et Sociales, on a project to design statistical measures of brain connectivity.
- Dr. Judith Dominguez Borrás joined Prof. Patrik Vuilleumier's research group. She has obtained a 2 year award from the Catalan Science Ministry to work on interactions between emotion and multimodal integration. Dr. Elena Patsenko has also joined the group in November. She will work on interactions between emotion and executive control.
- On October 1st, 2010, Dr. Julien A. Deonna became an FNRS Professor on the project 'Desire, Emotion and the Mind'. The 4 year project includes a new doctoral student, David Furrer, who is also joining Thumos, the philosophy group of the NCCR.

- Thumos is welcoming other three new members; two of them on the project 'Emotions, Intentionality and Perspectives', one of the subprojects of the FNS Sinergia network 'Intentionality as the Mark of the Mental. Metaphysical Perspectives on Contemporary Philosophy of Mind', which started in March 2010. These are Dr. Luca Angelone, a post-doctoral research fellow, and François Jaquet, as a new doctoral student. They will both work under the supervision of Dr. Julien Deonna and Dr. Fabrice Teroni.
- The third new Thumos member is Dr. Anita Konzelmann Ziv. She has been awarded a Bourse d'Excellence UNIGE 2010, a prize aimed at supporting female researchers at higher post-doctoral level awarding a three-year assistant professorship (Sep. 2010-Aug. 2013) to realize the research project "Self-Evaluation – A Quest for Wisdom", a philosophical project submitted to cross-faculty competition
- On October 1st, 2010, Dr. Cristina Soriano became senior researcher in charge of the research focus 'Language and Culture' and, as already announced, responsible for the Education & Training program of the CISA-NCCR ■

NEWS

Achievements

Emotion and Music: Prof. Didier Grandjean is a member of the 7th Framework EU Program SIEMPRE (Social Interaction and Entrainment using Music Performance Experimentation). The program started on May 1, 2010 and will run for 3 years. Stanford University (USA) and Waseda University (Japan) are the two non-European partners.

Prof. Patrik Vuilleumier received a 2.4 million Euros grant from the **Marie-Curie FP7** framework to fund a new postdoc program called "Brain & Behavior Interdisciplinary Research in Geneva" (BRIDGE) which will start in January 2011 (first call for applications).

Prof. Ernst Fehr received the **Gustav-Stolper-Award** from the Verein für Socialpolitik, the largest association of economists in the German language area, on September 9, 2010.

Julien Zanetta is the 2010 winner of the **Prix Ardit** (for Modern French Literature) and of the **Prix Barbour** (for Literary Criticism) for his master dissertation.

Dr. Julien A. Deonna was awarded an **FNRS Professorship** in the domain of the philosophy of emotions on a project entitled 'Desire, Emotion and the Mind'. The position and the project, which will also finance the equivalent two doctoral students, will be hosted by the CISA and the Philosophy Department.

Olivier Massin has received the **Bourse Philibert Collard**, a prize rewarding the most promising young philosopher of the Geneva Philosophy Department.

Dr. Tobias Brosch is the 2010 winner of the **Heinz-Heckhausen-Jungwissenschaftler-Preis 2010** of the German Society of Psychology for his Ph.D. dissertation directed by Klaus Scherer.

Dr. Martin Desseilles received the **Lundbeck Psychiatry Prize** on depression.

Dr. Yann Cojan received the **Williams James Prize** on consciousness and hypnosis.

Dr. Julie Péron together with **Prof. Didier Grandjean** obtained a new CHF 60'000 **funding grant from AXA** to sponsor Peron's post doctoral research entitled "Electrophysiological activity of the ventral striatum in response to emotional prosody among patients suffering from resistant and chronic depression".

Prof. David Sander, Prof. Didier Grandjean and Dr. Benoît Bediou will teach on « Emotion et résolution des conflits » in October and November 2010 at the **Bernheim Chair Peace & Citizenship**, ULB, Brussels ■

OTHER "MARK YOUR CALENDARS"

Preproposals deadline: November 15, 2010

Workshop "Belief Feeling and Emotion"
November 19, 2010. For more information:
Pascal.Engel@unige.ch

Colloquium "Architecture émotionnelle", January 20-22, 2011
Researchers in the emotional sciences will interact with architects on the notion of urban space. For more information : <http://archiemo.wordpress.com/>

Annual Research Forum (ARF) The NCCR's Annual Research Forum will take place on February 14-15, 2011 in the presence of the International Scientific Council. All NCCR researchers are expected to come and present their latest results.

Colloquium "Perception des dieux, émotions, maîtrise rituelle : corps divins, corps humains"
March 24-26, 2011. For more information: Anne-Caroline.Rendu@unige.ch.

Site visit, June 28-29, 2011 ■

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The NCCR Affective Sciences is hosted by the
Université de Genève
Centre Interfacultaire en Sciences Affectives
7, rue des Battoirs - 1205 Genève - Switzerland
tel: (+41) 22 379 98 00
fax: (+41) 22 379 98 44

Editor: carole.varone@unige.ch

For further information on our work, see our website
www.affective-sciences.org